

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## PCT

<b>To:</b>  Thompson, Clive B. GLAXO GROUP LIMITED CN925.1 980 Great West Road Brentford, Middlesex TW8 9GS GRANDE BRETAGNE		<div style="border: 1px solid black; padding: 5px; margin: 0 auto; width: 80%;"> <b>GlaxoSmithKline</b>  <b>Corporate IP</b>  <b>Received</b>  <b>12 MAR 2004</b> </div> <div style="margin-top: 5px;">                 ATTORNEY                  IPM: N/A                  ATTY CHECKED             </div>	<b>NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT</b>  (PCT Rule 71.1)
		Date of mailing (day/month/year)  <b>10.03.2004</b>	
Applicant's or agent's file reference <b>PI4748</b>		<b>IMPORTANT NOTIFICATION</b>	
International application No. <b>PCTGB 03/00501</b>	International filing date (day/month/year) <b>05.02.2003</b>	Priority date (day/month/year) <b>08.02.2002</b>	
Applicant <b>GLAXO GROUP LIMITED</b>			

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.



For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:  <div style="display: flex; align-items: center;"> <div>                         European Patent Office                          D-80298 Munich                          Tel. +49 89 2399 - 0 Tx: 523656 epmu d                          Fax: +49 89 2399 - 4465                     </div> </div>	Authorized Officer  <b>Ambroa, J.R.</b>  Tel. +49 89 2399-8012
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**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>PI4748</b>	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)																									
International application No. <b>PCTGB 03/00501</b>	International filing date ( <i>day/month/year</i> ) <b>05.02.2003</b>	Priority date ( <i>day/month/year</i> ) <b>08.02.2002</b>																								
International Patent Classification (IPC) or both national classification and IPC <b>C07D401/04, C07D401/04</b>																										
Applicant <b>GLAXO GROUP LIMITED</b>																										
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of    sheets.</p> <p>3. This report contains indications relating to the following items:</p> <table style="width: 100%;"><tr><td style="width: 5%;">I</td><td style="width: 5%;"><input checked="" type="checkbox"/></td><td>Basis of the opinion</td></tr><tr><td>II</td><td><input type="checkbox"/></td><td>Priority</td></tr><tr><td>III</td><td><input checked="" type="checkbox"/></td><td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td></tr><tr><td>IV</td><td><input type="checkbox"/></td><td>Lack of unity of invention</td></tr><tr><td>V</td><td><input checked="" type="checkbox"/></td><td>Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td></tr><tr><td>VI</td><td><input type="checkbox"/></td><td>Certain documents cited</td></tr><tr><td>VII</td><td><input type="checkbox"/></td><td>Certain defects in the international application</td></tr><tr><td>VIII</td><td><input type="checkbox"/></td><td>Certain observations on the international application</td></tr></table>			I	<input checked="" type="checkbox"/>	Basis of the opinion	II	<input type="checkbox"/>	Priority	III	<input checked="" type="checkbox"/>	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	IV	<input type="checkbox"/>	Lack of unity of invention	V	<input checked="" type="checkbox"/>	Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	VI	<input type="checkbox"/>	Certain documents cited	VII	<input type="checkbox"/>	Certain defects in the international application	VIII	<input type="checkbox"/>	Certain observations on the international application
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Date of submission of the demand  <b>05.08.2003</b>	Date of completion of this report  <b>10.03.2004</b>																									
Name and mailing address of the international preliminary examining authority:   <b>European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465</b>	Authorized Officer  <b>Uselli, A</b>  Telephone No. +49 89 2399-7366  																									

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/GB 03/00501**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

**Description, Pages**

1-36 as originally filed

**Claims, Numbers**

1-18 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:
5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

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EXAMINATION REPORT**

International application No. PCT/GB 03/00501

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 15,17(industrial applicability)

because:

☒ the said international application, or the said claims Nos. 15,17 relate to the following subject matter which does not require an international preliminary examination (specify):

**see separate sheet**

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the Standard.

☐ the computer readable form has not been furnished or does not comply with the Standard.

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-18
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-18
Industrial applicability (IA)	Yes: Claims	1-14,16,18
	No: Claims	

2. Citations and explanations

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/00501

**Re Item III**

**Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

Claims 15 and 17 relate to subject matter considered by this Authority to be covered by the provisions of Rule 67.1 (iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject matter of these claims, cf. Article 34(4)(a)(i) PCT.

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1- Reference is made to the following documents:

d1: WO 97 16440 A

d2: WO 01 25219 A

**2- Novelty**

Present compounds of formula (I) are regarded as novel.

The general formula (I) of d1 encompasses, at least in part, present formula (I) when R2 is Ar2-C1-6alkyl, X is NR3, R1 is Ar and m,n and p are 1. However, d1 does not disclose compounds wherein the piperidine ring is substituted by a (substituted) phenyl group (e.g. R1=aryl) or compounds containing a moiety corresponding to the present chain -NR1C(R2R3)-. Thus, on account of these two features, the compounds of formula (I) generically included in the formula (I) of d1 can be regarded as a novel selection.

Present compounds are novel in respect to the compounds of d2 at least on account of the piperidine ring.

Thus, the requirements of Art.33.2 PCT are satisfied since all the claims relate to the compounds of formula (I).

**3- Inventive step**

3.1- The applicant seems to have set himself the task of providing novel tachykinins antagonists to be used for the treatment of various conditions such as CNS disorders, depressive states and anxiety.

Documents d1 and d2 relate to compounds having the same use of present compounds. Considering the chemical structures of the compounds disclosed, it is

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB 03/00501

considered that d1 represent the closest state of the art.

For the purpose of assessing the inventive activity during the international preliminary examination, it is accepted that present compounds possess the alleged activity, i.e. they act as antagonists of the tachykinin receptors.

Accordingly, the technical problem may be taken as the provision of alternative antagonists of tachykinins.

3.2- The solution proposed by the present invention, represented by the compounds of formula (I), does not appear to involve any inventive activity.

As already stated above, d1 discloses a general class of tachykinins antagonists which encompasses, at least in part, present compounds of formula (I). The mere fact of selecting inside a group of compounds having a certain activity, a subclass of molecules and then observing that the molecules of said subclass possess the same activity of the compounds of the first group cannot be regarded as an activity involving an inventive skill.

Accordingly, present claims 1 to 18 do not meet the requirements of Art.33.3 PCT.